Documentation Sheet

National Aerospace Laboratories	*Class:* Unrestricted *No. of Copies:* 6
Title:	*Active Cancellation in Adaptive Array with Non-uniform Inter-element Spacing*
Author/s:	Hema Singh, Priyesh, R M Jha
Division: ALD	*NAL Project No:* A-1-178
Document No: PD AL 1208	*Date of issue:* February 2012
Contents:	33 Pages 30 Figures 2 Tables 7 References
External Participation:	Nil
Sponsor:	x
Approval:	Chairman, Systems Engineering Cluster
Remarks:	x
Keywords:	Active cancellation, Non-uniform spacing, Modified Improved LMS algorithm, Adapted pattern.

Abstract:

The radiation pattern of phased array depends on the geometrical configuration, in particular on the inter-element spacing. In this document the suppression capabilities of linear/planar array is studied when the antenna elements are placed at non-uniform/random spacing. The modified improved LMS algorithm is employed to generate the optimum weights, and hence the adapted pattern for such arrays. The signal scenarios consisting of single/multiple, narrowband/wideband sources, uncorrelated/correlated/coherent sources are considered.